origin of the appendix. The latter was perfectly healthy; there was no thickening of its wall, and it was quite free from any adhesions. The protruding mucous membrane having been reduced, the opening in the cæcum was closed by a single row of silk (Lembert) sutures, its margins having been liberated and refreshed. The opening in the abdominal wall was then closed, except at its centre, in which a small plug of iodoform gauze was left. There was no further escape of faecal matter from the wound, which was healed at the end of three weeks, when the patient left the hospital and returned home.

The case is a good illustration of a perityphlitic abscess due to perforation of the cæcum, a condition the existence of which has been denied by some writers. Others admit the possibility of its occurrence, the frequency with which the suppuration is of caecal origin being variously given as 0.5, 1, 4, 9 per cent. of the cases of abscess met with in this situation.

In one of the most recent works¹ on this subject it is interesting to note the following statement: "In fact, it will be generally allowed that a perforating ulceration of the cæcum, though it does certainly occur, is of so rare occurrence that it may be disregarded."

Treves² says: "A perforation may be found in the cæcum. In a few rare instances this may be primary and due to mischief starting in the wall of the cæcum, the appendix itself being sound. In the great majority of examples, however, the perforation is secondary and is due to the abscess—which has originated in the appendix—making its way into the cæcum. The perforation under such circumstances takes place from without." That this result is not uncommon is shown by Bull, for in an analysis of 57 cases of appendicular abscess, where the pus was not evacuated by the surgeon, he found that in 15 instances (26 per cent.) it burst into the cæcum.

In the following case a condition very similar to that met with in Case I was found at the time of operation, and in the absence of any other assignable cause it is not improbable that the perityphlitic abscess was produced in the same way.

CASE II. Perityphlitic Abscess due to Perforation of the Cæcum: Faecal Fistula: Ileo-colostomy: Recovery.—A male, aged 19 years, was admitted on April 5th, 1892, suffering from a faecal fistula, the orifice of which was situated in the right groin about one inch above the centre of Poupart's ligament. About six months previously an abscess had formed in this situation with the usual symptoms of perityphlitis, and after the evacuation of its contents a fistulous opening remained, through which there had since been a constant discharge of pus and faecal matter. On May 3rd (an attempt to close the fistula by scraping with a Volkmann's spoon having failed) the external opening was enlarged, and the fistula was followed to its communication with the bowel. This was found to be situated on the anterior surface of the cæcum close to its junction with the ileum. The appendix was quite healthy. The margins of the opening, which was about the size of a shilling, were thickened and indurated, and the adjacent bowel was so firmly bound down by adhesions that it was impossible to free the opening sufficiently to allow of its closure by a plastic operation. Ileo-colostomy was therefore performed, a loop of ileum a few inches from its termination being united by means of Senn's bone plates to the transverse colon. The external wound was then closed except at its centre, in which a drainage tube was left. As regards the after-course of the case, there was a free faecal discharge from the wound for the first ten days; it then began to diminish, and at the end of a month it had entirely ceased, the fistulous opening being soundly healed. It has since remained so, and at the present time—nearly six years after the operation—the patient is in the enjoyment of good health and quite free from any intestinal trouble.

A perityphlitic abscess may also be due to perforation of the cæcum by a stercoral ulcer—that is, that form of ulceration which is not uncommonly met with in the large intestine, and especially in the cæcum, from the irritation and pressure of hard masses of impacted faecal matter. Though it is somewhat unusual for stercoral ulceration to run on to perforation, unless the faecal impaction is secondary to obstruction of the bowel lower down—for example, from a stricture—yet this result may occur in cases of simple long-continued constipation, where the accumulation of faeces is apparently due to loss of tone in the walls of the bowel, as was illustrated in the following case:

CASE III. Perityphlitic Abscess due to Stercoral Ulceration and Perforation of the Cæcum: Extravasation of Faeces into Peritoneal Cavity: Death.—A man, aged 67 years, was admitted on December 3rd, 1894, presenting symptoms of incomplete intestinal obstruction. He had enjoyed good health until seven weeks previously, when he began to suffer from obstinate constipation, accompanied by occasional vomiting and colicky abdominal pains.

When admitted there was considerable distension of the abdomen, so that nothing could be felt on palpation. On digital examination the rectum was found to be empty and free from growth or any evidence of stricture. The obstruction was not complete, for there were several slight actions of the bowels after admission as the result of enemata, the motions being small and hard.

On the fourth day after admission the patient was suddenly seized with

a severe rigor, and the temperature, which had hitherto been normal, rose to 103°. He recovered from the rigor, but the same evening he all at once complained of acute pain in the right iliac fossa, became extremely collapsed, and died in the course of two hours.

Necropsy.—On opening the abdomen the peritoneal cavity was found to contain pus and fluid faeces, most abundant in the neighbourhood of the right iliac fossa. There was no evidence of recent peritonitis. The upper part of the rectum, colon, cæcum, and small intestine for some distance were distended with masses of hardened faeces. Behind the cæcum were a number of old adhesions bounding an irregular abscess cavity, which contained pus mixed with faecal matter and communicated with the general peritoneal cavity. On opening the cæcum, a superficial ulcer the size of a penny, involving only the mucous membrane, was found on its posterior wall, and at the centre of the ulcer there was a small perforation about the size of a pea. The appendix and other parts of the intestine, large and small, were healthy and free from any evidence of ulceration or other form of disease.

In this case the perityphlitic abscess appeared to have existed for some time, and its situation at the posterior part of the pelvis behind the cæcum accounted for the absence of any local symptoms pointing to its presence. The rigor a few hours before death followed by the sudden collapse were no doubt due to the contents of the abscess bursting into the peritoneal cavity, and the absence of any signs of general peritonitis was owing to the fact that death took place before there had been time for it to develop.

REFERENCES.

¹ Hawkins, *On Diseases of the Vermiform Appendix*, p. 11. ² *Perityphlitis and its Varieties*, p. 18.

REMOVAL OF ONE FREE CALCIFIED, AND TWO SUBSEROUS, PEDICULATED FIBROMYOMATA DURING PREGNANCY.

By ARTHUR J. WALLACE, M.D. EDIN.,

Demonstrator of Midwifery and Gynaecology, University College, Liverpool; Honorary Obstetric Physician, Ladies' Charity and Lying-in Hospital, Liverpool; Anaesthetist, Royal Infirmary, Liverpool.

It is a good and generally accepted rule that uterine fibromyomata should not be interfered with during pregnancy unless urgent symptoms demand treatment. Conditions occasionally arise which justify operative measures, and the unusual condition in the case I am about to relate seemed most certainly to call for operative relief.

On November 6th, 1897, Dr. J. J. Tisdall, of this city, asked me to see with him a woman, aged 38, who had been married for two years.

History.—For some twenty months a tumour was known to have existed in the abdomen, and she had not menstruated since a scanty period of short duration at the end of September, whilst she was also greatly troubled with nausea and vomiting, most marked in the mornings. She had become pregnant for the first time a few months after marriage, but a miscarriage at the third month, accompanied by a very profuse haemorrhage, nearly cost the patient her life. With these two exceptions menstruation had always been regular and normal. There was no history of leucorrhœa, nor indeed of pelvic trouble of any kind beyond that mentioned above.

Present State.—Lying in the central part of the abdomen, immediately above the pubes was a regularly rounded tumour of fairly smooth surface, not tender at all, but of hard consistence; in fact, it felt like a stone. Its mobility was very limited, it could be moved slightly from side to side and slightly upwards, but downwards it would not budge a millimetre. The percussion note over it was dull, and auscultation gave negative results. *Per vaginam* the pregnant uterus was felt lying retroverted below and behind the tumour. The latter could easily be felt; it was about the size of a foetal head, and its stony hardness again impressed one. In the angle between uterus and tumour was a small mass about the size of a pigeon's egg. Movement of the uterus did not affect the tumour, nor was the former affected by putting the latter through its limited range of mobility. Dr. Tisdall informed me that when he attended the patient during her first pregnancy and miscarriage the tumour lay behind the uterus. However, it was very evident that now it lay in front of it, partly in the true pelvis and partly in the abdomen; that it was practically absolutely fixed, and that underneath it the two months' pregnant uterus was wedged and prevented from increasing in size and rising into the abdomen—a state of matters which called for interference. Dr. Tisdall agreed with me in thinking that we probably had to deal with a fibroid of the uterus, although both the history and the physical signs lacked the clearness necessary for a definite diagnosis.

Operation.—When the state of matters had been explained to the patient she decided to undergo operation, and accordingly I opened the abdomen on November 29th. The tumour presented at once as a whitish-yellow mass with a hard finely uneven surface, the hardness evidently being due to the deposit of calcareous material immediately beneath the peritoneal covering. Exploration revealed the presence of very numerous bands of adhesions connecting the tumour to the pelvis, chiefly to its brim. These arranged themselves practically into three sets, uniting the tumour (1) to the brim of the left anterior pelvic quadrant, (2) to the left side of the promontory of the sacrum, (3) to the right side of the pelvic brim and to the vermiform appendix. There were also odd adhesions

passing to the intestines and great omentum. The tumour was thus slung across the upper part of the true pelvis, and the tightness of the suspensory bands accounted for the limited mobility of the growth. After it was freed from all adhesions and lifted up, no attachment to the uterus could be found, and the tumour simply required to be drawn out of the abdomen. The two months' pregnant uterus now came into view, lying retroverted in Douglas's pouch. Two subperitoneal myofibromata were attached to its anterior wall by a common pedicle two inches wide by half an inch in thickness. The larger of the two, rather larger in size than a pigeon's egg, felt suspiciously soft and boggy, so the removal of both was decided upon. The pedicle was tightly clamped, ligatured in three sections between clamp and tumours, and the latter cut off. Further examination of the uterus showed that two more (interstitial) myofibromata were growing in its wall. There was not the slightest trace even of a very fine pedicle, which might have been torn through when the calcified fibroid had been lifted up, gently as this had been done. Practically no blood was lost. The abdomen was closed, a glass drainage tube being left in. This was removed on the third day.

After-History.—The patient did well, except for some temporary intestinal paralysis, which soon passed off, and she is now, at the time of writing (April 15th) in pretty good health. The pregnancy continues, the uterus being felt now well above the pubes. The morning sickness has never recurred since the operation.

Description of Tumour.—The calcified tumour weighed 1 lb. 2 oz. It was irregularly oval in shape, measuring 12 c.cm. in length, and 9½ c.cm. in greatest width. On section the cut surface presented the appearances offered by fibromyomata of the uterus, except at the periphery, where a narrow calcified zone extended more or less completely around the tumour. After pieces of tissue had been removed for microscopic examination, the two halves of the mass were carefully needed, but no trace of deep calcareous deposit could be discovered. The calcareous shell—the calcification *en coque* of older writers—varied in thickness, but this nowhere exceeded 1 c.cm. It is noteworthy that the shell was thickest over areas to which adhesions were attached. At one point just beneath the shell was a cleft-like cyst, containing turbid fluid. Microscopically the usual structure of uterine fibromyomata was distinctly recognisable, but scattered about in the substance of the tumour, more numerous towards the centre, were many small rounded cavities and elongated clefts and fissures, the latter of which pursued often an irregularly tortuous course between the fibrous bundles. The tissues bounding these spaces in some cases appeared structureless and homogeneous. There was no trace of any lining epithelium, and the contents, when any were present, were merely granular debris. Thorn¹ found similar spaces in his specimen of calcified submucous fibroid, but he regarded them apparently as extensions of uterine glands, the epithelium of which had been lost or destroyed. Fatty degeneration was specially searched for but not found. Of the two pediculated tumours the smaller was quite solid; the larger, measuring 7 by 4½ cm., contained one large and several smaller cystic cavities, a condition which confirmed the suspicion aroused at the time of operation by the boggy sensation obtained on palpation. These cavities contained a turbid, greyish fluid without trace of blood.

It is uncommon during life to find fibromyomata lying free (that is, separated from the uterus) in the peritoneal cavity, and very rarely are such tumours calcified. Two cases have been reported lately where such tumours were removed by operation.

Dr. Amand Routh² removed by laparotomy from a woman, aged 50, a calcified fibromyoma which was attached only by vascular adhesions to the small intestines. A scar on the fundus uteri marked the site of its former attachment to that viscus. The tumour lay behind the uterus, and, in the absence of uterine symptoms, was diagnosed as a dermoid. It was "almost non-vascular, even when cut into, and was in an advanced state of calcareous degeneration."

Dr. Gill Wylie³ reported a case where the patient suffered from melancholia, subinvolution of the uterus, and a tumour which lay between the symphysis pubis and the retroposed uterus. On opening the abdomen he found the tumour to be a calcified fibromyoma. It was lying entirely free, without adhesions, and was of the size and form of a kidney. There were no traces of other myomata in the uterus.

The deposit of calcareous material in fibromyomata seems to depend to a great extent on interference with their vascular supply (Meadows,⁴ Matthews Duncan,⁵ Gusserow⁶), such as may occur when a pedicle becomes attenuated, as in the case of a "free" (as distinct from an "encapsulated") subserous myoma; or when a myoma having contracted adhesions elsewhere loses its connection with the uterus, or when the menopause arrives. It is generally about the latter period, according to Gusserow,⁶ that calcification occurs, and all writers are agreed that the internal irregular deposit is commoner than the external shell-like form. There are three specimens of the latter and two of the former in the Pathological Museum of University College, Liverpool. As a fibromyoma increases in size by proliferation of tissues at its periphery (Haultain⁷), calcification occurring here will arrest growth, if the latter has not already ceased, in consequent of deficient nutrition.

In the case I have related there would seem to be some imilarity between the condition of the tumour and litho-

pædion (as distinguished from lithokelyphos) formation, which, according to Albers,⁸ is associated with the presence of adhesions between the foetus and its surrounding sac. The fact that the deposit was thickest where adhesions were attached seems to point to a definite relationship between them.

REFERENCES.

- ¹ Thorn, Zur Kasuistik der Uterosteine, *Zeits. f. Geburts. u. Gynäk.*, Band xxviii.
- ² Amand Routh, *Trans. Obstet. Soc. Lond.*, vol. xxxviii, p. 388.
- ³ Gill Wylie, *Proceed. New York Obstet. Soc.*; *New York Jour. of Gynecol. and Obstet.*, March, 1894.
- ⁴ Alfred Meadows, *Med. Times*, 1855, ii, p. 171.
- ⁵ Matthews Duncan, *Med. Times*, 1885, i, p. 39.
- ⁶ A. Gusserow, *Die Neubildungen des Uterus*, p. 34, Stuttgart, 1885.
- ⁷ F. W. N. Haultain, *System of Gynaecology* (Alburt and Playfair), p. 567.
- ⁸ Albers, *Zur Geschichte des Lithopædion*, *Monats. f. Geburtskunde*, 1861, Band xvii, p. 42, quoted by Webster, *Ectopic Gestation*, p. 96.

HEREDITARY KERATOSIS OR TYLOSIS PALMÆ.

By VAUGHAN PENDRED, M.B.DURH., F.R.C.S.ENG.,
Hammersmith.

THE following is so complete and remarkable a history of the handing down of this rare disease in unbroken succession for at least one hundred and fifty years that I have considered it worthy of being placed on record.

My attention was called to the palms of the hands and soles of the feet of a woman, aged 36, of a phlegmatic Teutonic type. The palms and palmar surface of all the digits presented a hard, horny epidermis, cracked in many directions, and blackened with dirt on account, as the patient explained, of the impossibility of keeping them clean. The whole of the affected area was seen, as the hands were held extended palms upwards and the fingers approximated. The margin strictly outlining the hand was marked with a thin red line, except in the case of the digits, where the thickened skin joined the normal skin with an abrupt edge. The whole thickness of the skin could be pinched up, or, more correctly, the margin could be raised as though it were a sheet of mill-board attached to the normal skin of the dorsum of the hand. Where deep cracks occurred, a pinkish soft line, tender to the touch, was seen at the bottom of these fissures. The plantar surfaces presented a like appearance, except that the fissures were not so numerous, and the whole thickening was even more marked. The lesion was exactly symmetrical.

My patient gave the following account of herself, and said that it equally applied to all the affected members of her family, varying only in the degree of suffering caused by the disease.

At birth her palms and soles were noticed to be redder than is normally the case, and a week later, when her mother was "churched," the surfaces were becoming scaly. There has been no change in their condition throughout her life, nor have the lesions spread beyond the original limitation. From time to time the horny layer is shed in flakes, and leaves a raw bleeding surface very tender to the touch. A two hours' "washing" always causes her trouble, owing to subsequent scaling and soreness. Her state of health directly affects the condition of her hands and feet. Her maternal aunt concurred with her in the statement that the disease always attacked the same areas in all the cases, and that there was no record of any individual having infected another. My patient anoints her hands with vaseline, but no other remedy has been used, as she says that it is well known that "no doctor can cure the disease." I had an opportunity of examining the hands of her sister and one of her nephews; they would not show me their feet, as they were very sensitive about their "affliction," and they presented precisely the same appearances as above described.

The appended family tree was obtained without much difficulty from my patient and her aunt, as their memory is kept green by the constant recurrence of the condition in each generation. There is a family tradition that it was introduced by the marriage of an ancestor with a German woman. In this connection it is worthy of note that the three members affected whom I saw were of German type, and the aunt unaffected of a spare, wiry, English type. I give the genealogy as it stands in relation to my patient: